NICOS
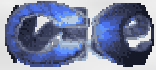
the Network based Instrument Control System

http://tacogate.frm2.tu-muenchen.de/nicos
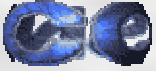
Motivation: NICOS and TACO
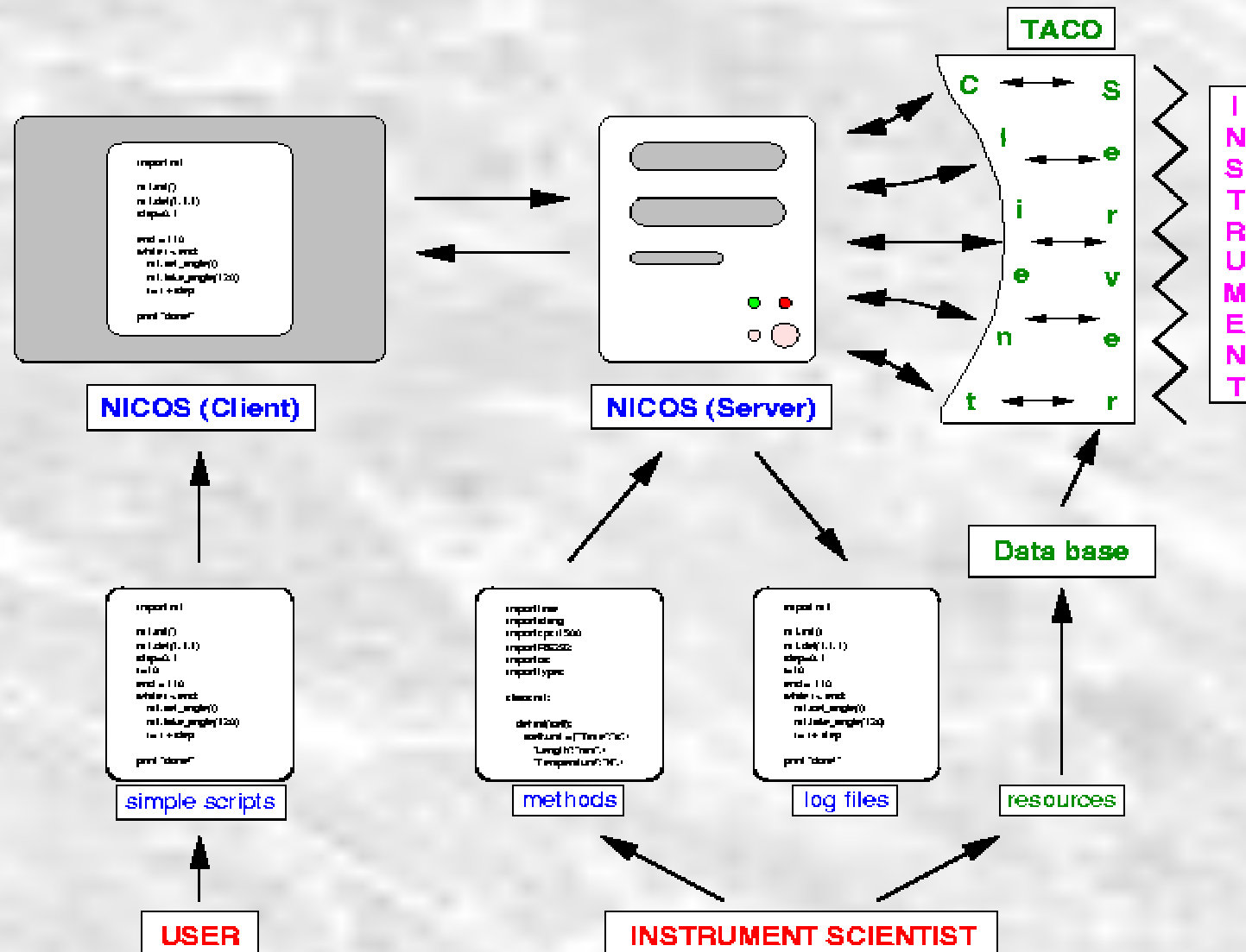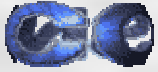
Selected Features:

" user script language: python

" client-server technology

" password authentification

" run time updating of scripts

" run time manipulation of script variables

" multithreading for user commands

" interruption/continuation of scripts

" script execution monitor

" variables inspection monitor

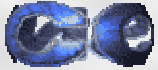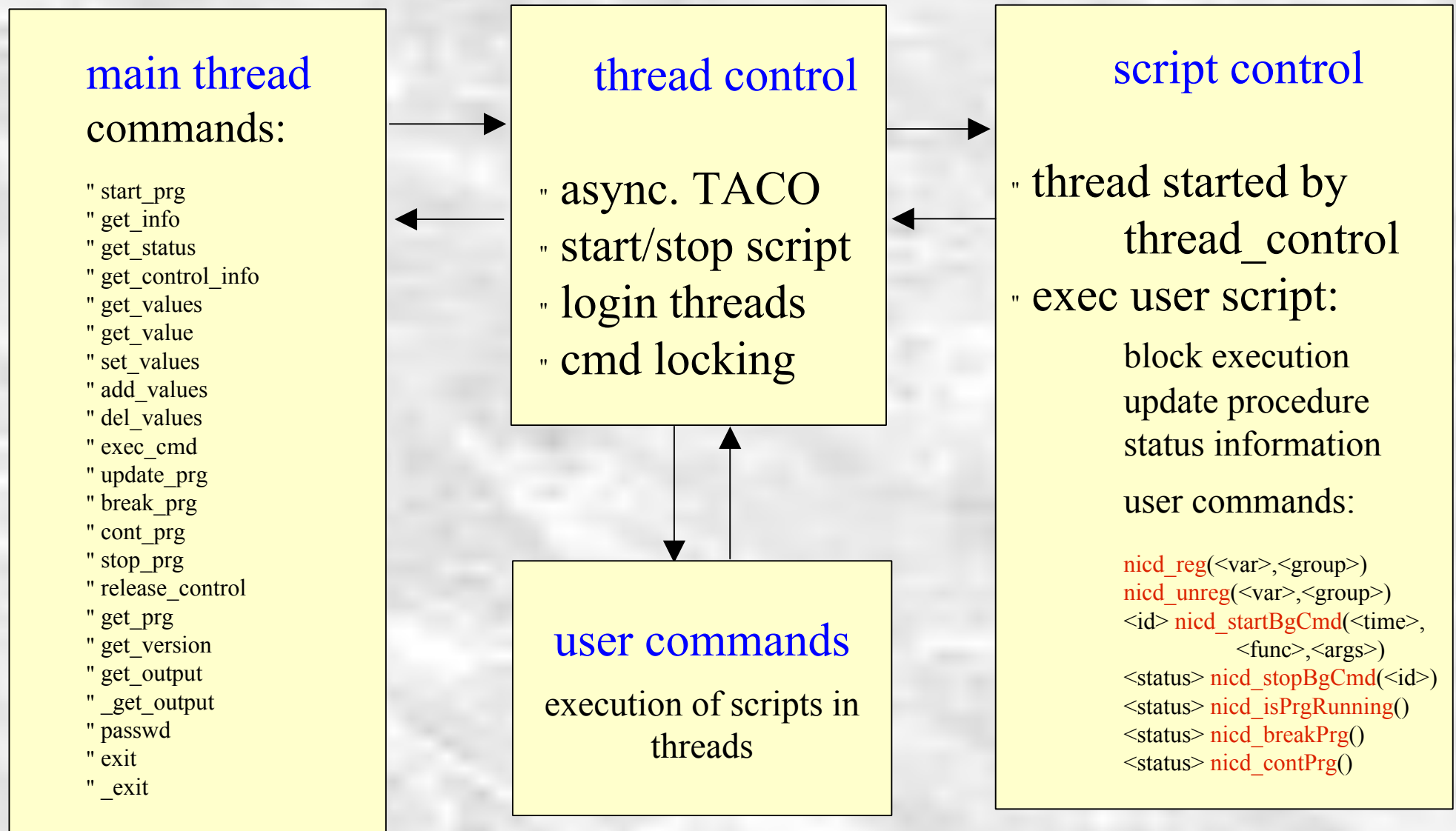# NICOS: Client-Server Concept

NICOS

" **Written in PyQt**
" **authentification (login)**
" **user editor (get, run, update)**
" **method editor (for beam line scientists)**
" **script control monitor**

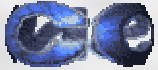## *NICOSD*

" Written in Python
" Python tcp stream server
" multi-thread support
" security: login, passwd, trusted hosts
" multiple user login
" user priorities
" python configuration script

NICOSD: The NICOS Daemon (v.0.01.09)

main thread
commands:

" start_prg
" get_info
" get_status
" get_control_info
" get_values
" get_value
" set_values
" add_values
" del_values
" exec_cmd
" update_prg
" break_prg
" cont_prg
" stop_prg
" release_control
" get_prg
" get_version
" get_output
" _get_output
" passwd
" exit
" _exit

thread control

" async. TACO
" start/stop script
" login threads
" cmd locking

script control

" thread started by thread_control
" exec user script:

block execution
update procedure
status information

user commands:

nicd_reg(<var>,<group>)
nicd_unreg(<var>,<group>)
<id> nicd_startBgCmd(<time>, <func>,<args>)
<status> nicd_stopBgCmd(<id>)
<status> nicd_isPrgRunning()
<status> nicd_breakPrg()
<status> nicd_contPrg()

user commands

execution of scripts in threads

NICOS: The Client (PyQt, v 0.01.03)